DATA QUALITY METRICS

DATA QUALITY METRICS

- DQFAS
- MEPRS Program Office
- PASBA

DATA QUALITY METRICS

PRODUCTS

- MEQS Database Load, EASIII Transmission, and Workload Report
- Unit Cost Comparison Metric
- MEPRS Discrepancy (Errors)
- MEPRS Currency

DATA QUALITY METRICS

PRODUCTS - PASBA

- DEERS/CHCS Synchronization
- Standard Ambulatory Data Record (SADR) Timeliness
- Standard Inpatient Data Record (SIDR) Timeliness
- Standard Ambulatory Data Record (SADR)Provider Specialty Code

DATA QUALITY METRICS

PROCEDURES

As Pertains to Unit Cost Comparison Metric

- Identify Groupings
- Establish Data Elements
- Obtain Raw Data (MEQS)
- Calculate Group Mean(s) and Standard Deviation
- Identify Outliers

DATA QUALITY METRICS

FY99 UNIT COST METRIC RESPONSES

Categories of Response

- **Data Quality Issues**
  27.43%
- **High Cost (Business Practice)**
  23.93%
- **High Cost (Mission Essential)**
  20%
- **Low Cost (Good Business Practice)**
  28.7%

DATA QUALITY METRICS

MEQS Database Load, EAS III Transmission, and Workload Report

Frequency -

Mondays and workday following transmit suspense dates.

Metric Parameters match PASBA's MEPRS Discrepancy (Errors)

DATA QUALITY METRICS

MEQS Database Load, EAS III Transmission, and Workload Report

Database Load -

- **Data Availability FY****
- **Site Transmission Status (Initial)**

DATA QUALITY METRICS

MEQS Database Load, EAS III Transmission, and Workload Report

- EAS Data Transmission Currency Status

- Daily Data Transmission Status

- Workload Reports
  - Inpatient
  - Ambulatory
  - Ancillary

DATA QUALITY METRICS

PASBA MEPRS DISCREPANCY (ERRORS)

- Identical Metric Parameters as MEQS Database Load, EAS III Transmission, and Workload Report

- Workload = Occupied Bed Days
  Ambulatory Visits

- Frequency - Monthly

DATA QUALITY METRICS

PASBA MEPRS DISCREPANCY (ERRORS)

POCs:

MEPRS:
Gena Carey
210.637.2230
DSN 471.2230

PASBA:
Garnet Robinson
210.221.1747
DSN 471.9113/1747

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC

Identify Outliers

- Determine the Mean (Average)
- Determine the Standard Deviation
- Identify Upper and Lower Li

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
GROUP MEAN / STANDARD DEVIATION

- Determine the mean
- Determine the deviation
  Subtract the mean from each value
- Deviations are then squared and added,
  the result is then divided by the num
  of values becoming the variance
- To obtain the standard deviation,
  calculate the square root of the varia

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
GROUP MEAN

- **Determine the mean**

$$\frac{1.74 + 2.47 + 3.66 + 4.73 + 5.14 + 6.23 + 7.29 + 8.93 + 9.56}{9}$$

$$= 5.53$$

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
STANDARD DEVIATION - 4 STEPS

STEP 1

- **Determine the deviation**
  Subtract the mean from each value

1.74	-	5.53	=	-3.79
2.47	-	5.53	=	-3.06
3.66	-	5.53	=	-1.87
4.73	-	5.53	=	-0.80
5.14	-	5.53	=	-0.39
6.23	-	5.53	=	0.70
7.29	-	5.53	=	1.76
8.93	-	5.53	=	3.40
9.56	-	5.53	=	1.03

$\Sigma x = 49.75$ $\Sigma(x\text{-mean}) = 0$

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
STANDARD DEVIATION

STEP 2

- **Deviations are then squared and added,**

$3.79^2 = 14.35$
$3.06^2 = 9.35$
$1.87^2 = 3.49$
$0.80^2 = 0.64$
$0.39^2 = 0.15$
$0.70^2 = 0.49$
$1.76^2 = 3.11$
$3.40^2 = 11.58$
$4.03^2 = 16.26$

$\Sigma(x\text{-mean})^2 = 59.41$

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
STANDARD DEVIATION

STEP 3

- **Divide the result by the number initial va**

The variance is now

$$\frac{59.41}{9} = 6.60$$

STEP 4

Calculating the square root now provides the standard deviation

$$\sqrt{6.60} = 2.57$$

DATA QUALITY METRICS

UNIT COST COMPARISON METRIC
UPPER AND LOWER LIMITS

- **The standard deviation is then added/subtracted to the mean.**

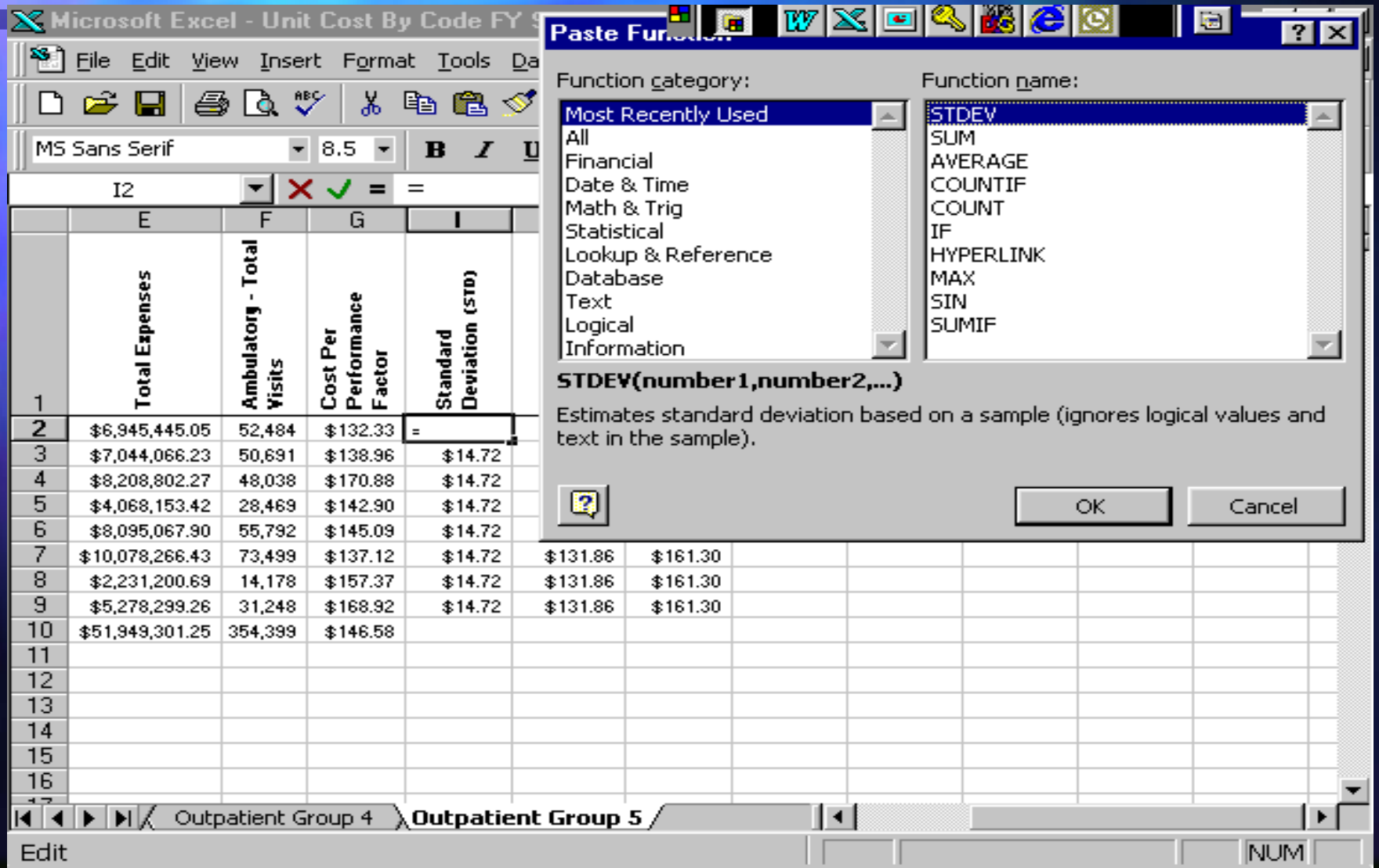
5.53 + 2.57 = 8.10 = Upper Limit

5.53 - 2.57 = 2.96 = Lower Limit

- **Any value which exceeds either the upp lower limit are now considered outliers.**

DATA QUALITY METRICS

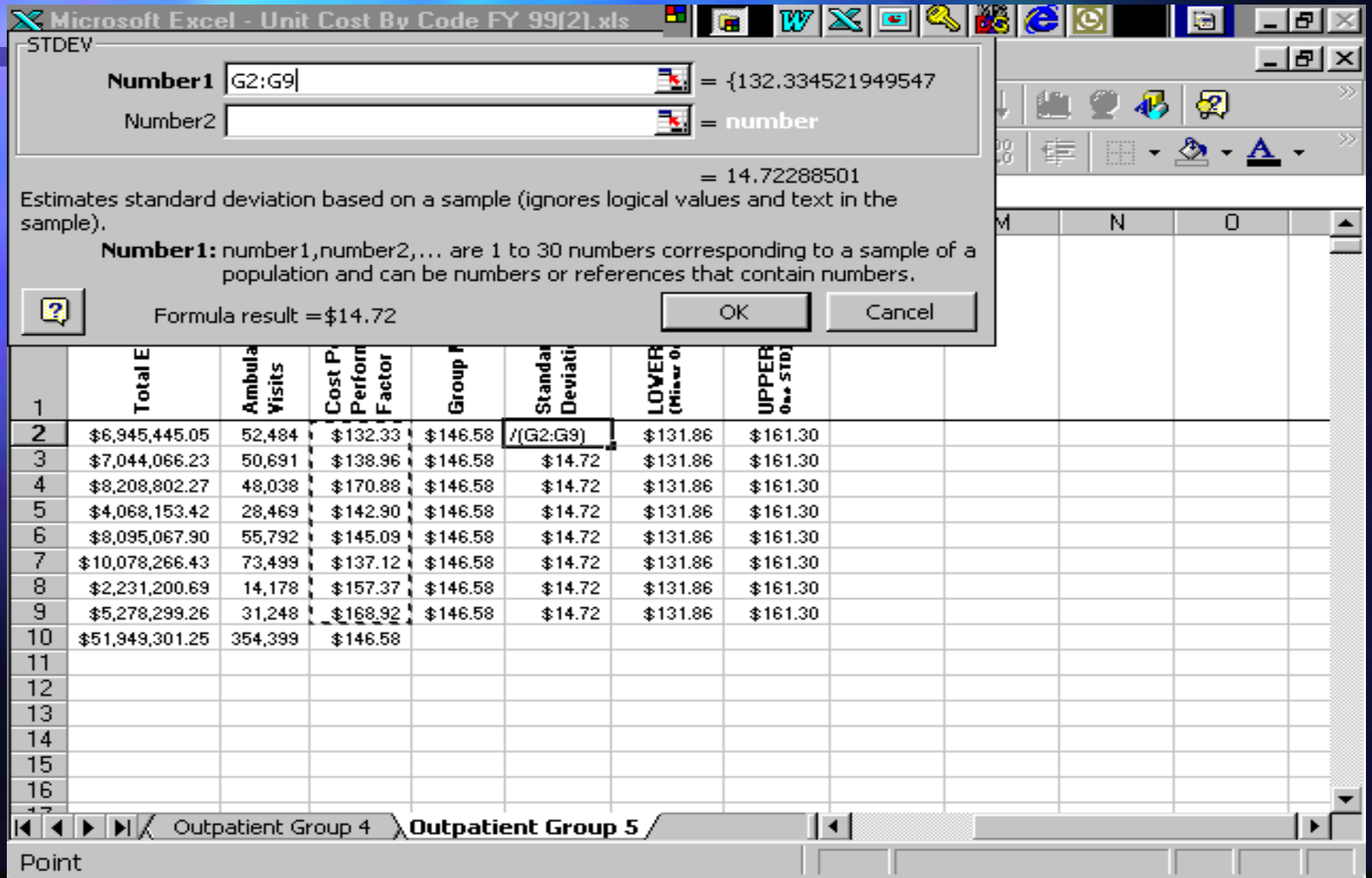
Standard Deviation - Excel Procedure



	E	F	G	I		
1	Total Expenses	Ambulatory - Total Visits	Cost Per Performance Factor	Standard Deviation (STD)		
2	$6,945,445.05	52,484	$132.33	=		
3	$7,044,066.23	50,691	$138.96	$14.72		
4	$8,208,802.27	48,038	$170.88	$14.72		
5	$4,068,153.42	28,469	$142.90	$14.72		
6	$8,095,067.90	55,792	$145.09	$14.72		
7	$10,078,266.43	73,499	$137.12	$14.72	$131.86	$161.30
8	$2,231,200.69	14,178	$157.37	$14.72	$131.86	$161.30
9	$5,278,299.26	31,248	$168.92	$14.72	$131.86	$161.30
10	$51,949,301.25	354,399	$146.58			
11						
12						
13						
14						
15						
16						

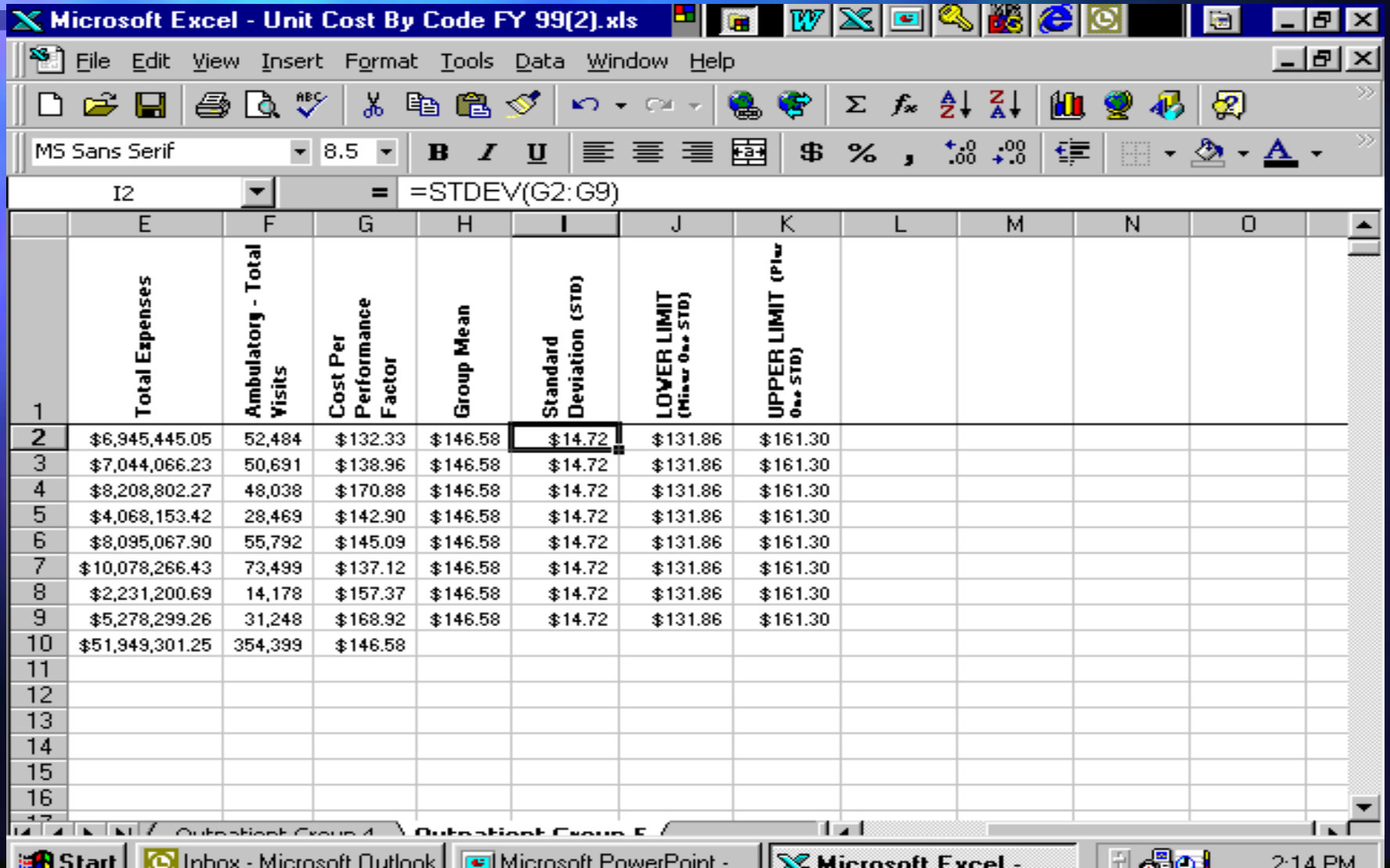
DATA QUALITY METRICS

Standard Deviation - Excel Procedure



DATA QUALITY METRICS

Standard Deviation - Excel Procedure


Microsoft Excel - Unit Cost By Code FY 99(2).xls
File Edit View Insert Format Tools Data Window Help
MS Sans Serif 8.5
I2
=STDEV(G2:G9)

	E	F	G	H	I	J	K	L	M	N	O
1	Total Expenses	Ambulatory - Total Visits	Cost Per Performance Factor	Group Mean	Standard Deviation (STD)	LOWER LIMIT (Mean One STD)	UPPER LIMIT (Plus One STD)				
2	$6,945,445.05	52,484	$132.33	$146.58	$14.72	$131.86	$161.30				
3	$7,044,066.23	50,691	$138.96	$146.58	$14.72	$131.86	$161.30				
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